

KAWAI

X20 Personal Keyboard

Owner's Manual

Thank you for your purchase of a KAWAI X20 Personal Keyboard.

Kawai's X20 is a superbly engineered musical instrument designed to bring you fun and enjoyment — no matter what your level of musical experience may be. You'll have fun as this manual helps you explore the powerful and exciting features of the X20 — particularly our exclusive ONE FINGER AD-LIB.

To get the most from your new X20 keyboard, please read this entire manual carefully. Should you have difficulty getting the X20 to perform properly, turn first to the "Trouble-Shooting" section (on the next page) of this manual. If the solution is not found there, please refer to the Table of Contents and review the pertinent section of this instruction manual.

Have fun learning to play your X20!

Table of Contents

■ Trouble-Shooting On Your X20.....	1	■ Using Auto-Accompaniment.....	5
■ Overall Diagram and Explanation.....	1	◆ Changing Accompaniment Tempo.....	6
■ Before Using Your X20.....	3	■ Using ONE FINGER AD-LIB To Play Like a "Pro"	6
■ Getting Started On Your Keyboard.....	4	■ Using the SYSTEM Functions.....	8
◆ Selecting Sounds.....	4	■ Chord Table.....	10
■ Selecting Accompaniment Styles.....	5		

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a different electrical circuit from the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

- This instrument complies with the limits for a class B digital apparatus, pursuant to the Radio Interference Regulations, C.R.C., c. 1374.

- ⑤ **ONE FINGER AD-LIB button**
This button activates KAWAI's exclusive ONE FINGER AD-LIB feature which allows you to sound like a "pro" with the touch of a finger.
- ⑥ **START/STOP button**
This button starts and stops the rhythm or automatic accompaniment.
- ⑦ **TEMPO buttons**
The TEMPO buttons can be used to control changes in auto Accompaniment tempo.
- ⑧ **ACCOMP. STYLE button**
This button is used when selecting from among the 50 Accompaniment Styles stored in the keyboard's memory.
- ⑨ **SOUND button**
This button is used to select from among the 100 sounds available in the SOUND LIST.
- ⑩ **SELECTOR buttons**
- a) **Numeric buttons (Ten keys)**
Used to enter the number of the sound or accompaniment style you want. To enter a number from 1 to 9, just press the number you desire. The lamp beside the SOUND button or ACCOMP. STYLE button will begin to flash for about one second indicating that the keyboard is waiting for you to press another digit. Press any additional digits while the lamp is flashing. After this one-second pause, the lamp will stop flashing and will light continuously showing that a number has been selected. To enter a number between 1 and 9 without

the one-second pause, enter two "zeros" before the number. For example, you would rapidly press "0-0-6" to select sound number "6" without a pause.

To enter a two- or three-digit number, press all the digits in rapid succession. For example, to enter sound number 025, press 2 followed quickly by 5. After a one-second pause, the lamp beside the SOUND button will stop flashing and sound 025 will be selected. To avoid the one-second pause, rapidly enter "0-2-5". The sound 025 will be selected immediately.

If you wait too long to enter the last digit "5", the keyboard will think you meant to select "2" and then changed your mind to select "5". The "005" will be selected instead of "025".

BE SURE TO ENTER ALL THE DIGITS OF THE DESIRED NUMBER IN RAPID SUCCESSION.

b) **-1/+1 buttons**

These buttons are used to select the next higher (or lower) sound or accompaniment style. Pressing the +1 button will select the next higher sound or style. Pressing the -1 button will select the next lower sound or style.

⑪ **STEREO CHORUS button**

This button allows you to add a deep stereo richness to the X20's 100 sounds.



You will hear a click sound whenever you press the buttons (except for the DEMO, START/STOP, and POWER buttons).

■ Rear Panel



⑫ **STEREO PHONES Jack**

When stereo headphones are connected to this jack, the sound from the speakers is cut off. This allows you to play the keyboard at night and at other times when you might be concerned about disturbing others. This jacks can also be used to send the keyboard's sound through an external amplifier or amplified home stereo system.

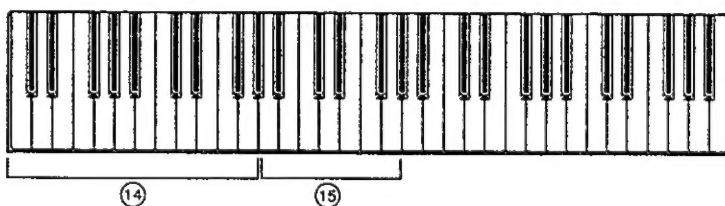
⑬ **DC IN Jack**

This jack is used to connect an optional Power Adaptor (Kawai PS-123 or PS-121) (available separately).



See page 3 for special instructions if you are using a universal AC adaptor or other brand of adaptor.

■ Keys



⑭ **Lower Keyboard (C1 - G#2)**

These are used to trigger chord forms when the auto-accompaniment function is selected.

⑮ **ONE FINGER AD-LIB Keys (A2 - G#3)**

These keys are used to play ONE FINGER AD-LIB phrases when the ONE FINGER AD-LIB function is selected.



Of course, the keys in the special keyboard sections named above also function as a normal keyboard when all automatic settings are off.

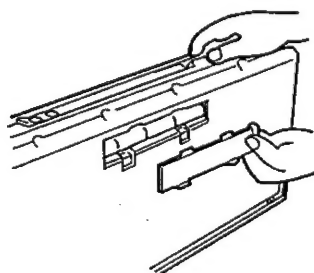


Throughout this manual, the keys will be referred to in the following manner: C1 stands for "the first C" on the keyboard, counting from the left. B2 stands for "the second B" on the keyboard from the left. The total range of your keyboard is C1 to C6.

■ Before Using Your X20

1. Cautions

- Do not subject the keyboard to severe shocks.
- Do not expose the keyboard to direct sunlight, or high temperatures (such as inside your car on a warm day).
- Do not use the keyboard where there is excessive moisture or dust.
- Do not disassemble or attempt to modify the keyboard.
- Should the keyboard become soiled, clean it using a soft, dry cloth. If this does not remove the stain, wet the cloth slightly before wiping. Never use alcohol or thinner to clean your keyboard.
- Do not allow foreign matter to enter the gaps between the keys or around the buttons.



2. Connecting the Power Supply

Your keyboard can use either your home AC power outlet or dry cell batteries as a power source.

■ To insert batteries:

1. Turn the unit over and remove the battery cover.
2. Insert six Size C dry cell batteries. Be sure they are aligned in the proper direction.
3. Replace the battery cover.



As the batteries begin to run down, the volume of the keyboard will decrease and the sound quality will begin to change or deteriorate. The unit may begin to malfunction. At that time, you should replace all six of the batteries. Do not mix battery types (or new batteries with old ones), as this may cause problems such as battery fluid leakage. Remove the batteries when not using the keyboard for long periods of time.

■ To Use An AC Power Outlet:

Connect a PS-123 or PS-121 adaptor (available separately) to the adaptor terminal on the rear panel of the keyboard. Then, connect the adaptor to a wall socket.



We recommend that you use a KAWAI AC adaptor (12-volt/500 mA) with the X20. If you decide to use a universal adaptor from another manufacturer, please be sure of the following:

- (1) *The voltage selector should be set at 12-volts.*
- (2) *The polarity selector must be set to "negative" (—) polarity, otherwise the keyboard will not operate (or will run on batteries until the batteries are drained).*
- (3) *The adaptor must have at least 0.5 Amp (A).*

■ Connecting the Keyboard to an Audio Device

To enjoy listening to the sound of your X20 through your amplified home stereo system or other external amplifier, purchase an adaptor plug or cord (with a stereo phones plug on one end and connectors appropriate for your audio device on the other end) at an electrical goods store or audio specialty shop. Use the cord or adaptor plug to connect the keyboard's STEREO PHONES jack to the LINE IN or AUX IN jacks on your stereo amplifier or powered receiver. Be sure you set your X20 at a moderate volume level. High volume output can damage your external amplifier or speakers.

■ Protective Plastic Covering On Front Panel

Your keyboard comes equipped with a thin plastic covering over the front panel designed to protect panel from dust and scratches. If you want to remove this covering, carefully use a fingernail to lift up one of the corners. Then, slowly peel off the covering and discard it.

■ Getting Started On Your Keyboard:

◆ Selecting Sounds

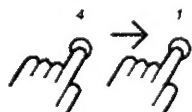
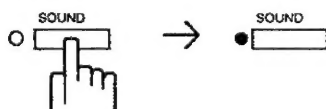
1

POWER



MASTER VOLUME

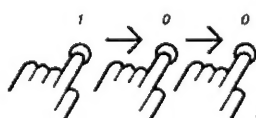
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3



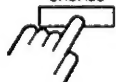
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5



STEREO CHORUS



This section will show you how to select any of the 100 sounds listed in the SOUND LIST on the keyboard's front panel.

1. First, press the POWER button to turn the keyboard "on". The lamp beside the SOUND button will light. Press one of the keys on the keyboard. You should hear the sound which is numbered 001 (PIANO 1). The volume of the entire keyboard can be controlled with the MASTER VOLUME buttons.
2. Check to be sure that the lamp beside the SOUND button is lit (if not, press the SOUND button now). Next, quickly press "4" and then "1" with the SELECTOR buttons to select sound number 041 (DISTORTION). The lamp beside the SOUND button will flash for about one second and then resume continuous lighting. Press one of the keys on the keyboard. You should hear the sound which is numbered 041 (DISTORTION).



When you use the SELECTOR buttons to select a two-digit or three-digit number, enter all the numbers in rapid succession. A lower number will be entered if you take too long to enter the second or third digits.



You will hear a click sound whenever you press the buttons (except for DEMO, START/STOP, and POWER buttons).

3. You can use the SELECTOR section to choose any of the keyboard's 100 sounds quickly and easily. The +1 button adds "one" to the currently selected number, while the -1 button subtracts "one". Look at the SELECTOR section and find the button marked +1. When you press it, you will hear a click sound and sound 042 will be selected. When you press one of the keys on the keyboard, you will hear sound number 042 (OVERDRIVEN). Pressing the -1 button in the SELECTOR section will take you back to sound number 041.

■ Using Hand Percussion

4. Press "1-0-0" in rapid succession to select sound number 100 "DRUM SET". When you press one of the keys on the Lower Keyboard, you will hear the sound of the instrument pictured above that key. The keys of the Upper Keyboard will also produce drum sounds — even though there are no pictures above them. The following chart shows the 21 drum sounds assigned to the Lower Keyboard (from C1 to G#2). Note that the "E1" means the first E key from the left side of the keyboard. "G#2" is therefore the second G# key from the left. Starting with the next note (A2), the same 21 drum sounds are assigned to the next 21 keys in identical order.

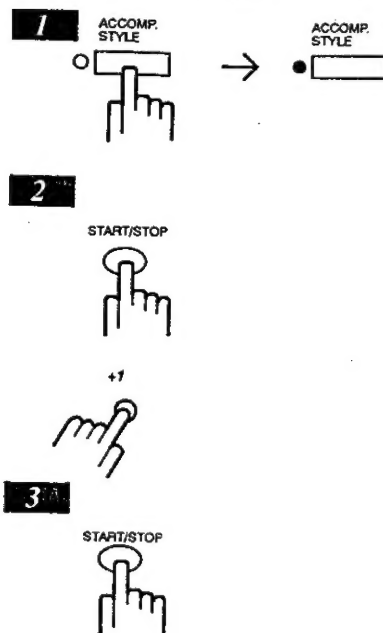
Key	Instrument	Key	Instrument
C1	Bass Drum	B1	Low Mid Tom
C#1	Side Stick	C2	Hi Mid Tom
D1	Acoustic Snare	C#2	Crash Cymbal
D#1	Cabasa	D2	Hi Tom
E1	Electric Snare	D#2	Ride Cymbal
F1	Low Snare	E2	Hi Bongo
F#1	Closed Hi-Hat	F2	Low Bongo
G1	High Floor Tom	F#2	Open Hi Conga
G#1	Pedal Hi-Hat	G2	Cowbell
A1	Low Tom	G#2	Low Conga
A#1	Open Hi-Hat		

5. Press "5" to select sound 005 (E. PIANO).

■ Adding Stereo Chorus

Pressing the STEREO CHORUS button adds a deep stereo richness to the currently selected sound. Pressing the button a second time cancels the effect.

■ Selecting Accompaniment Styles



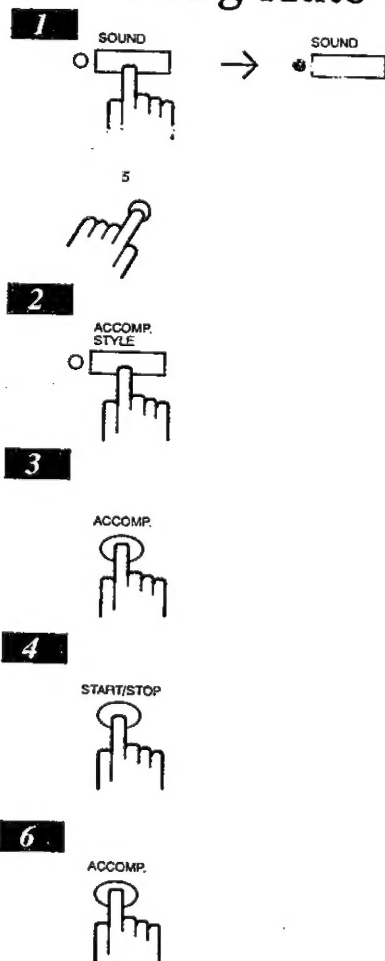
This section will show you how to select and play any of the 50 Accompaniment Styles listed in the STYLE LIST on the keyboard's front panel.

1. First, press the ACCOMP. STYLE button. You will hear a click sound and the lamp beside the ACCOMP. STYLE button will light.
2. If you press the START/STOP button at this point, you will hear the Rhythm Pattern (Drums only) for Accompaniment Style (which we'll refer to as "Style") number 001 (JAZZ FUNK).

Now, find the SELECTOR buttons and press the +1 button. The Style will change to number 002 (SOUL FUNK). You can use the SELECTOR buttons in this way (or the numeric buttons for direct selection) to select any Style you desire.

3. Next, press the START/STOP button. A drum "Ending" which matches the currently selected Style will play to finish the song. If you want the Style to end abruptly without the ENDING, press the START/STOP button quickly two times.

◆ Using Auto-Accompaniment

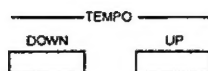


The X20's auto-accompaniment (short for automatic accompaniment) allows you to create a realistic "full band" performance by simply pressing and holding left-hand chords as you play the melody.

The 21 keys on the left side of the keyboard (which we call the Lower Keyboard) are used to play the chords which control the auto-accompaniment.

1. Press the SOUND button. The lamp beside the button will light up. Then, select a sound using the SELECTOR buttons. Let's try sound 005 (E. PIANO).
2. Select a Style using the "ACCOMP. STYLE" button and the SELECTOR buttons.
3. Press the ACCOMP. button once. This activates the AUTO function. Hold down one note in the Lower Keyboard. You should hear a complete chord play. This is called "one finger chord mode". When you have pressed the ACCOMP. button but have not yet started the Accompaniment with the START/STOP button, any key in the Lower Keyboard will produce a complete chord. This mode is particularly helpful when playing hymns or songs with simple chordal backgrounds.
4. Press the START/STOP button. The auto-accompaniment (Rhythm, Chord and Bass parts) should begin playing.
5. Now press one or more of the keys on the Lower Keyboard. The auto-accompaniment chords will change as you press different keys. Your keyboard recognizes a wide variety of chords. See Page 10 for a chart of these chords (in the key of C) and some valuable hints for beginners.
6. Press the ACCOMP. button again. Bass and Chord parts will be muted (only the Rhythm part will play).
7. Press the ACCOMP. button one more time. All the accompaniment parts will be restored.
8. Press the START/STOP button to stop the auto-accompaniment.
9. Press the ACCOMP. button to turn off the AUTO function.

Note: When you activate the auto-accompaniment feature, the pitch of the "normal" keyboard section on the right will drop by one octave for certain sounds (bass, guitar, etc). This octave shift helps keep these sounds closer to their normal sound range, even though you're playing upper-range notes on the keyboard.



■ Changing Accompaniment Tempo

You can use the TEMPO buttons to change the tempo of any accompaniment. The UP button causes the tempo to increase. The DOWN button causes the tempo to decrease.

Pressing the TEMPO UP button within five seconds after selecting a new Style will change the tempo to a factory preset rate that suits the new Style.

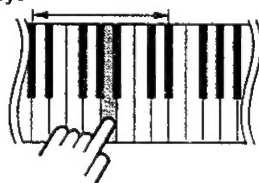
■ Using ONE FINGER AD-LIB To Play Like a "Pro"

1



2

ONE FINGER AD-LIB keys



3



ONE FINGER AD-LIB is an exclusive Kawai feature which allows anyone (at any level of musical ability) to sound like a "pro". With the touch of a finger, you can play hundreds of impressive ad-lib melodies with full auto-accompaniment and chord progressions. ONE FINGER AD-LIB will make your keyboard immediately fun and "playable" for every member of your family (even the non-players)! The ONE FINGER AD-LIB phrases are determined by the Accompaniment Style (or "Style") you select. For example, there are "funky" ad-lib phrases for Style number 004 (DISCO FUNK) and some exciting rock'n roll phrases for Style number 023 (R&R).

How does ONE FINGER AD-LIB work?

1. Use the ACCOMP. STYLE button and the SELECTOR buttons to select a Style. Next, press the ONE FINGER AD-LIB button. You will hear a click sound.
2. Now, press and hold down one of the keys in the ONE FINGER AD-LIB section of the keyboard (shown in the drawing at left). By holding down a single key, you can play an entire ad-lib phrase! Try other ONE FINGER AD-LIB keys. Note that each key plays a different phrase and that some keys use different sounds than other keys.
3. **Adding Auto-Accompaniment**
Press the ACCOMP. button to turn on the AUTO mode. Then, press the START/STOP button. The Style you selected will begin to play. Listen closely! Notice that the auto-accompaniment chords are changing automatically. The keyboard has been designed so that each Style is accompanied by an appropriate progression of chords that plays automatically.
4. Now, hold down one of the keys in the ONE FINGER AD-LIB section of keyboard. The ad-lib phrase will play. If you continue to hold the AD-LIB key down, you'll notice that the phrase changes automatically with the chord progression! Now hold down other AD-LIB keys and begin to enjoy all the musical fun that ONE FINGER AD-LIB has to offer.
5. To change the preset chord progression, play any chord on the Lower Keyboard. This will override the preset chord progression. Then, the ONE FINGER AD-LIB phrases will change to match your own chords.



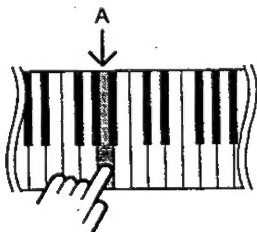
IMPORTANT NOTE: When you turn ONE FINGER AD-LIB "on", specific sounds will automatically appear on the ONE FINGER AD-LIB phrases. These are pre-assigned at the factory. To select your own sounds, turn ONE FINGER AD-LIB "on" first and then select a sound. Your new sound will be assigned to all twelve ONE FINGER AD-LIB phrases.

◆ A Note About the ONE FINGER AD-LIB Chord Progressions

C	C	F7	F7
---	---	----	----

3

ACCOMP.



4

START/STOP



A	A	D7	D7
---	---	----	----

When you start the auto-accompaniment with ONE FINGER AD-LIB turned "on", the chord progression that plays is automatically in the key of C. For example, the progression for Style number 001 (JAZZ FUNK) is as shown at left.

■ Changing Keys with ONE FINGER AD-LIB

What if you wanted the chord progression for JAZZ FUNK to be in the key of "A"? You can change it! Follow this procedure:

1. Be sure that the ONE FINGER AD-LIB button is turned on.
2. Make sure the auto-accompaniment is stopped (use the START/STOP button if necessary.)
3. Turn on the AUTO mode using the ACCOMP. button. Then play an "A" in the Lower Keyboard as shown in illustration at left.
4. Then, press the START/STOP button to start the auto-accompaniment. The chord progression will now be in the key of "A" as shown at left.

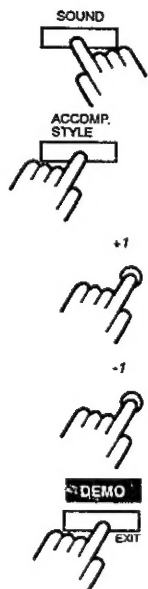
To play in the key of "G", just repeat the four steps above playing a "G" key instead of the "A" key in Step 3.

■ Using the SYSTEM Functions:

In this section, we will describe the keyboard's SYSTEM functions which deal with the overall control of the keyboard. The SYSTEM functions are assigned the following "function numbers":

1. TUNING CONTROL (Pitch Adjustment)
2. TRANSPOSE (To Change Keys)
3. CLICK ON/OFF

◆ 1. TUNING CONTROL



With the accompaniment stopped, press the ACCOMP. STYLE and SOUND buttons simultaneously. Next, press the "1" (not +1 or -1) key in the SELECTOR section. Then, if you press the +1 button once, the pitch will raise slightly. If you press the -1 button instead, the pitch will drop slightly. You can use the TUNE function to adjust the keyboard's pitch within a range of -08 to 07. Press the DEMO button to leave the SYSTEM mode.

◆ 2. TRANSPOSE



With the accompaniment stopped, press the ACCOMP. STYLE and SOUND buttons simultaneously. Next, press the "2" key in the SELECTOR section. Then, if you press the +1 button, the pitch will raise by a half-step. If you press the -1 button instead, the pitch will drop by a half-step. You can use the TRANSPOSE function to adjust the keyboard's pitch by as much as one full octave upward or downward (that is, from -12 half-steps to +12 half-steps).

Press the DEMO button to leave the SYSTEM mode.

◆ 3. CLICK ON/OFF

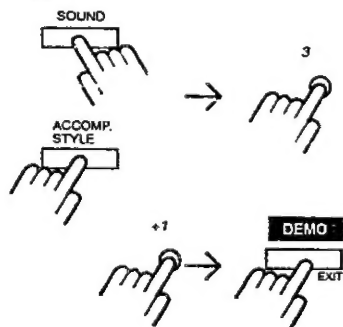
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2



3



You will hear a click sound whenever you press buttons (except for the START/STOP, DEMO, and POWER buttons). You can turn off the click sound if necessary.

1. With the accompaniment stopped, press the ACCOMP. STYLE and SOUND buttons simultaneously. Then, press the "3" key in the SELECTOR section.
2. Press the -1 button. Then, press the DEMO button to leave the SYSTEM mode. Try pressing any buttons on the front panel. You will not hear click sound.
3. To restore the click, perform the following procedure.

With the accompaniment stopped, press the ACCOMP. STYLE and SOUND buttons simultaneously. Next, press the +1 button. Then, press the DEMO button to leave the SYSTEM mode. Now, you will hear a click sound whenever you press buttons (except for DEMO, START/STOP, and POWER buttons).

◆ HELPFUL HINTS FOR BEGINNERS

As you've studied the chord forms on the previous page, you've probably noticed that there is often more than one way shown to play the same chord. For instance, there are three different ways to play a "C Major" chord (using 1, 2, or 3 notes). This has been done to accommodate different playing styles and make the X20 flexible for all levels of musical ability. But if you're a brand new beginner, the discussion of chord forms and intervals may be confusing. The quick hints below will show you the EASIEST way to play the basic chords:

(1) BASIC CHORD TYPES

There are several basic chord types that appear in most music. Below is a list of these chords and the way they would appear as chord symbols in the key of C:

MAJOR:	C, C Major, C Maj
MAJOR SEVENTH:	C Major7, C Maj7, CM7
MINOR:	Cm, C minor, Cmin
MINOR SEVENTH:	Cm7, C minor 7, Cmin7
DOMINANT SEVENTH:	C7

(2) QUICK CHORD FORMULAS

To play any chord, first identify the "root" note. If the chord is "Fm7", the root note is "F". Now use these simple formulas to play chords:

MAJOR CHORDS:

Play the root note only. If the chord is "G Major", just play "G".

MAJOR SEVENTH:

Play the root note plus one note below the root. If the chord is "D Maj7", play the root note "D" plus the "C-sharp" just below it. For "F Maj7", play the root note F plus the E below it.

MINOR CHORDS:

Play the root note plus the third note above the root. Make sure you count black and white keys. For "Dmin", play the root note "D" plus the third note above, which is "F". For "Gmin", play G and B-flat.

MINOR SEVENTH:

This one gets tricky. Play the root note, plus the third note above the root and the second note below the root. For "Dm7", play the root note D, the third note above (F) and the second note below the root (C). If this is too difficult, just use the MINOR CHORD formula shown above.

DOMINANT SEVENTH:

Play the root note plus the second note below the root. For "G7", play the root note G and the second note below it (F). For "C7", play C and B-flat.

Kawai hopes these quick formulas will help you to get started. But we hope you won't stop here. We encourage you to study the wide range of chord forms that your X20 will recognize and learn to play them in all keys.

You'll find that the more time you invest in learning chords, the more musical enjoyment you'll receive from your X20. Enjoy the "adventure" of learning music! And thank you for choosing Kawai!

KAWAI

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